

Having thus defined the invention, the following is claimed:

1. A module forming the secondary winding of a high frequency transformer, said module comprising a first conductive tube with first and second ends; a generally parallel closely adjacent second conductive tube with first and second ends, said tube having a central elongated passage for accommodating one or more primary windings; a magnetic core surrounding each of said tubes; a jumper strap joining said first ends of said tubes; and, a circuit forming connector at said second ends of said tubes.

2. A module as defined in claim 1 wherein each of said magnetic cores each comprise a plurality of doughnut-shaped rings around one of said tubes.

3. A module as defined in claim 2 including a nose piece over said jumper strap with a guide surface between said central passages of said parallel tubes.

4. A module as defined in claim 1 including a nose piece over said jumper strap with a guide surface between said central passages of said parallel tubes.

5. A module as defined in claim 4 including a conductive assembly comprising a third conductive tube with first and second ends, a fourth conductive tube with first and second ends and a second jumper strap joining said first ends of said third and fourth tubes into a parallel relationship to each other and to said first and second tubes; said third and fourth parallel tubes being telescoped

5 into said passages of said first and second tubes, respectively, and having elongated passages for accommodating said primary winding or windings with said first and second jumper strap spaced from each other; a first tubular insulator between said first and third tubes; a second tubular insulator between said second and fourth tubes; and a center tap connector joining said conductive assembly to a second end of one of said first and second tubes to form said tubes into a series circuit.

6. A module as defined in claim 5 wherein said second end of one of said first and second tubes and one end of one of said third and fourth tubes are connected to a rectifier.

7. A module as defined in claim 5 including an insulator between said jumper straps.

8. A module as defined in claim 2 including a conductive assembly comprising a third conductive tube with first and second ends, a fourth conductive tube with first and second ends and a second jumper strap joining said first ends of said third and fourth tubes into a parallel relationship to each other and to said first and second tubes; said third and fourth parallel tubes being telescoped
5 into said passages of said first and second tubes, respectively, and having elongated passages for accommodating said primary winding or windings with said first and second jumper strap spaced from each other; a first tubular insulator between said first and third tubes; a second tubular insulator between said second and fourth tubes; and a center tap connector joining said conductive assembly to a second end of one of said first and second tubes to form said tubes into a series circuit.

9. A module as defined in claim 8 wherein said second end of one of said first and second tubes and one end of one of said third and fourth tubes are connected to a rectifier.

10. A module as defined in claim 8 including an insulator between said jumper straps.

11. A module as defined in claim 1 including a conductive assembly comprising a third conductive tube with first and second ends, a fourth conductive tube with first and second ends and a second jumper strap joining said first ends of said third and fourth tubes into a parallel relationship to each other and to said first and second tubes; said third and fourth parallel tubes being telescoped into said passages of said first and second tubes, respectively, and having elongated passages for accommodating said primary winding or windings with said first and second jumper strap spaced from each other; a first tubular insulator between said first and third tubes; a second tubular insulator between said second and fourth tubes; and a center tap connector joining said conductive assembly to a second end of one of said first and second tubes to form said tubes into a series circuit.

12. A module as defined in claim 11 wherein said second end of one of said first and second tubes and one end of one of said third and fourth tubes are connected to a rectifier.

13. A module as defined in claim 11 including an insulator between said jumper straps.

14. A module as defined in claim 4 wherein said jumper strap is a center tap.

15. A module as defined in claim 3 wherein said jumper strap is a center tap.

16. A module as defined in claim 2 wherein said jumper strap is a center tap.

17. A module as defined in claim 1 wherein said jumper strap is a center tap.

18. A module forming the secondary winding of a high frequency transformer, said module comprising a first coaxial set of concentric, telescoped conductive tubes separated by a tubular insulator; a second coaxial set of concentric, telescoped conductive tubes separated by a tubular insulator; a magnetic core around each of said sets, said sets each having an elongated central passage for accommodating at least one primary winding, and conductor connecting said tubes of said sets into a series circuit.

19. A module as defined in claim 18 wherein each of said magnetic cores comprises a plurality of doughnut-shaped rings around one of said tubes.

20. A module as defined in claim 19 wherein said conductive tubes are formed by an elongated ribbon helixed around a central axis of said tube.

21. A module as defined in claim 18 wherein said conductive tubes are formed by an

elongated ribbon helixed around a central axis of said tube.

22. An electric arc welder comprising a high switching frequency inverter for driving the primary of an output transformer, said output transformer having a plurality of modules forming the secondary windings of said transformer, each of said modules comprising a first coaxial set of concentric, telescoped tubes separated by a tubular insulator, a second coaxial set of concentric, telescoped conductive tubes separated by a tubular insulator, said sets each having an elongated central passage for accommodating said primary, and a conductor connecting said tubes into a series circuit.

23. A welder as defined in claim 22 wherein said tubes of said modules are each connected to a rectifier to create a positive and negative current output and a circuit connecting said outputs in parallel.

24. An electric arc welding comprising a high frequency inverter for driving the primary of an output transformer with AC current, said output transformer having a plurality of modules forming the secondary windings, each of said modules having parallel conductive tubes connected in series and defining a pair of parallel elongated central passages to accommodating said primary winding.

25. A welder as defined in claim 24 wherein said tubes of said modules are each connected to a rectifier to create a positive and negative current output and a circuit connecting said outputs in parallel.

26. A welder as defined in claim 25 wherein said tubes of said modules are formed by an elongated ribbon helixed around a central axis of said tube.

27. A welder as defined in claim 24 wherein said tubes of said modules are formed by an elongated ribbon helixed around a central axis of said tube.

28. An electric arc welder comprising a high switching frequency inverter for driving the primary of an output transformer, said output transformer having a module forming the secondary winding of said transformer, said module comprising a first coaxial set of concentric, telescoped tubes separated by a tubular insulator, a second coaxial set of concentric, telescoped conductive tubes separated by a tubular insulator, said sets each having an elongated central passage for accommodating said primary, and a conductor connecting said tubes into a series circuit.

29. A welder as defined in claim 28 wherein said tubes of said module are each connected to a rectifier to create a positive and negative current output and a circuit connecting said outputs in parallel.

30. An electric arc welding comprising a high frequency inverter for driving the primary of an output transformer with AC current, said output transformer having a module forming the secondary winding, said modules having parallel conductive tubes connected in series and defining a pair of parallel elongated central passages to accommodating said primary winding.

31. A welder as defined in claim 30 wherein said tubes of said module are each connected to a rectifier to create a positive and negative current output and a circuit connecting said outputs in parallel.

32. A welder as defined in claim 31 wherein said tubes of said module are formed by an elongated ribbon helixed around a central axis of said tube.

33. A welder as defined in claim 30 wherein said tubes of said module are formed by an elongated ribbon helixed around a central axis of said tube.

34. A high frequency transformer for an electric arc welder with an inverter power source, said transformer including a number of modules, each containing a secondary winding section, said section interconnected and a primary winding through each of said modules.